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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,201	07/10/2001	Mark D. Montierth	10010392	1354

7590 05/31/2005

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EXAMINER	
DIVINE, LUCAS	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/903,201	MONTIERTH ET AL.	
	Examiner	Art Unit	
	Lucas Divine	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *20 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/20/05 have been fully considered but they are not persuasive.

With respect to applicant's argument on page 8 paragraph 5 that '*neither reference suggests use of a controller of the type employed in a cable that connects the peripheral to the host computer during normal operation*' and on page 9 paragraph 2 that '*Lin provides no suggestion that camera 2 corresponds to or is capable of performing the printer interface functions of a host computer.*'

In reply, the host computer claimed in the claim preamble has one claimed function, to connect to a cable. Further, generally in a printing system with a printer and a cable, the connected host computer device provides the data to be printed by the printer. The camera of Lin (digital still camera 2) acts as a host computer by providing data to be printed by the printer (picture data) as well as being connected to the cable 1. During normal operation, the camera provides picture data to be printed.

With respect to applicant's argument that the cost of the applicant's claimed invention would be less to produce than that of the combined obvious invention of Lin and Farago, saying '*ASICs or other custom designed circuits*' are expensive and the applicant's invention does not require them.

In reply, Farago teaches using a device attached to a printer to provide demonstrations of printer functionality, thus providing the demonstration data and control information to print

demonstration data (memory 1). Lin teaches the controller and printer interfaces, and thus the data memory of Farago can be placed in the cable of Lin to perform demonstrations. The change in the system of Lin is just that instead of inserting a flash memory with picture data on it, a flash memory with demonstration data could be inserted. Thus, there is no need for the ASIC (which acts as a adjunct controller) of Farago because Lin already teaches a controller for controlling the printer.

With respect to applicant's argument on page 10 paragraph 3 that state '*Applicant finds no suggestion from the combination of Lin, Farago, or Wett that a second boot mode would be desirable or would provide a more flexible or customizable system.*'

In reply, by giving the user more options on how to boot a device, especially externally wherein any boot mode could be used, creates a more flexible and customizable system. Further, Wett teaches (col. 1 lines 35-38) that the second boot mode would be desirable because it fixes the difficulty issues of accessing a device externally and for a user that would like to access the system for operational or debugging purposes.

Drawings

2. The amended drawing was received on 1/20/05. These drawings are accepted, and previous objections are withdrawn.

Specification

3. Previous objections to specification are withdrawn in view of applicant's amendments to the specification.

Claim Objections

4. Previous objections to claims are withdrawn in view of applicant's amendments to the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 – 6 and 10 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US 6753903) and Farago (US 6747752).

Regarding claim 1, Lin teaches **for a peripheral** (Fig. 1 ref. no. 3) **that during normal operation** (during normal operation, the camera provides picture data to be printed), **connects to a host computer** (camera 2 acts as a host computer by providing data to be printed by the printer and is connect through the cable 1 to the printer 3) **through a cable containing a controller** (cable 1, 4, 5, that contains controller 11), **a demonstration system comprising:**

a controller (controller 11, discussed in col. 3 lines 14-18) **of a type employed in the cable that connects the peripheral to the host computer during normal operation; and**

a memory that is external to the peripheral (removable memory 13), **contains data, and is coupled to the controller to enable the controller to read the data from the memory** (see functional lines in Fig. 1 coupling memory unit 13 with controller 11, wherein the controller can read data from the memory as discussed in col. 4 line 14) **for the peripheral to perform without being connected to the host computer** (col. 3 lines 22-29 teach transferring data from the external memory device instead being connected to host computing device 2 – see note above for computing device 2).

While Lin teaches a peripheral controlling system for use without a host machine, Lin does not specifically teach the memory to contain **demonstration data for controlling the peripheral to perform a demonstration.**

Farago teaches a peripheral controlling system for use without a host machine including a memory containing **demonstration data for controlling the peripheral to perform a demonstration** as discussed in col. 2 lines 50-67 and shown in Fig. 1.

It would have been obvious to one of ordinary skill in the art to add the demonstration data for performing peripheral demonstrations of Farago into the peripheral controlling system of Lin to provide a system where a cable could control the printer alone or the printer could be controlled by the host through the cable. The motivation for doing so would have been to provide a salesperson more options in demonstrating products. For example, if space or mobility is an issue, a memory card can be loaded in the cable of Lin and the peripheral can be demonstrated. Alternatively, if the salesperson had a lot of data and printing options they wanted to show off, there could be too much data for a memory card to contain or too much functionality

for the cable controller to compute. In such a case a host computing device would be desirable in the demonstration of peripherals and the cable could just be used for data transfer and formatting.

Note: The applicant states: 'a cable containing a controller' thus defining a cable as cable (a bound or sheathed group of mutually insulated conductors) + functional circuitry. Lin teaches cables 4 & 5 containing adaptive circuitry.1. Therefore, the cable + functional circuitry of Lin as well as other cables + functional circuitry read on applicant's described definition of a 'cable.'

Regarding claim 2, which depends from claim 1, Lin further teaches the **peripheral is a printer** (Fig. 1 ref. no. 3).

Regarding claim 3, which depends from claim 2 as it depends from claim 1, Lin further teaches that:

the controller in the cable operates to format data from the host computer for a print operation of the printer (controller 11 utilizes format controller 10 as shown in Fig. 2, wherein data coming from the computing device 2 is formatted and sent to the printer 3 as discussed in col. 3 lines 49-52); **and**

the controller in the demonstration system operates to format data from the memory as required for the print operation of the printer (controller 11 utilizes format controller 10 as shown in Fig. 2, wherein the DMA controller 27 receives information from the memory 13 and the format controller 10 formats and sends said information to the printer 3 as discussed in col. 5 lines 13-19).

Regarding claim 4, which depends from claim 1, Lin further teaches

a connector having a pin layout for connection to the printer (Fig. 1 printer port 15 connects to the printer via connector cord 5);

a first enclosure containing the controller (as symbolized by the dotted line around adaptive controller unit 1); **and**

a second enclosure containing the memory (removable flash memory is known to have a plastic casing enclosure around the memory cells for protection).

Regarding claim 5, which depends from claim 4 as it depends from claim 1, Lin teaches that **the connector, the first enclosure, and the second enclosure are substantially identical to matching elements of the cable that connects the peripheral to the host computer during the normal operation** as evident from Fig. 1, wherein the same components are used for both normal operation and just utilizing the external memory.

Regarding claim 6, which depends from claim 1, Lin teaches the memory to be flash memory, which is **non-volatile memory**.

Regarding claim 10, which depends from claim 1, Farago further teaches that **the external memory further comprises demonstration code that the controller executes.** Executable code is included to instruct the controller to perform formatting and sending of the data to the peripheral. This code is stored in programmable memory 1 shown in Fig. 1 along with other program code for controlling the printer demonstration as discussed in col. 2 lines 50-55.

Regarding claim 11, the structural elements of Lin and Farago teach the method steps of claim 11 as shown in the rejection of claim 1 and further discussed here. Lin and Farago teach:

connecting to the printer a cable containing a controller that is of a type used in a printer cable that connects the printer to a host computer during normal operation of the

printer (the step of connecting is taught in the connection of the cable 5 to the printer 3 of Lin, the cable type is discussed in the rejection of claim 1 above); **and**

storing demonstration data in a memory (taught in the demonstration data of Farago being stored in the removable memory 13 of Lin as discussed in the rejection of claim 1); **and**

connecting the memory to the cable to enable the controller to read the demonstration data from the memory and format the data for the printer (shown in the insertion of removable flash memory 13 into the adaptive cable [ref. nos. 1, 4, 5]).

Regarding claim 12, which depends from claim 11, Lin further teaches that:

the controller has a computer interface (Fig. 2 ref. no. 20, wherein the interface engine interfaces to the computer as discussed in col. 3 lines 53-61) **and a memory interface** (Fig. 2 ref. no. 27, wherein DMA controller interfaces to the controller to access flash memory card data as discussed in col. 4 lines 13-19),

the computer interface is connected through the printer cable to the host computer during normal operation (shown in cable connection 4 which connects the adaptive cable to the computing unit 2 in Fig. 1), **and**

connecting the memory comprises connecting the memory through the cable to the memory interface (the insertion of the memory in the adaptive cable connects the memory to the cable and thus to the memory interface 27 through connections 16 & 17).

Regarding claim 13, which depends from claim 12 as it depends from clam 11, Lin teaches:

the computer interface implements a protocol for serial communication with the host computer (interface 20 is stated as a USB [protocol] Serial Interface Engine)**and**

the memory interface implements an interface for access in a non-volatile memory (memory 13 is Removable Flash Memory which is non-volatile).

Regarding claim 14, which depends from claim 13 as it depends from claims 12 and 11, Lin further teaches:

the computer interface implements the protocol required for connection to a universal serial bus (USB Serial Interface Engine 20), **and**

the memory interface implements accesses to a serial memory (Lin teaches the DMA controller 27 to also access the System Firmware Memory 12 which is implied to be a EPROM as conventional to firmware through connection 17 which could also be an EEPROM as obvious to one of ordinary skill in the art).

Regarding claim 15, which depends from claim 12 as it depends from claim 11, Lin teaches that **the memory interface implements an interface for access in a non-volatile memory** (memory 13 is Removable Flash Memory which is non-volatile).

6. Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin and Farago as applied to claims 1 – 6 and 10 – 15 above, and further in view of Wett (US 5872945).

Regarding claim 7, which depends from claim 1, Lin and Farago teach all of the limitations of parent claim 1.

While Lin teaches **a first mode wherein the controller boots from internal memory** (col. 4 lines 40-46 teach the internal firmware memory running the initialization program when the system is booted), Lin does not specifically teach **a second mode wherein the controller boots from the external memory.**

Wett teaches **a second mode wherein the controller boots from the external memory.** Col. 1 lines 48-50 teach a **boot mode where a self-contained processor system boots from an external memory;** abstract lines 17-20 teach two boot modes, with booting from an internal memory being the first, and booting from an external memory being the second; and col. 5 lines 61-65 further discuss boot modes from internal and external memories, wherein the signal INT/EXT 425 determines said boot mode.

Wett is analogous art to that of Lin and Farago because it is a self-contained processor system with a controller, internal memory, and external memory.

It would have been obvious to one of ordinary skill in the art to add the second boot mode of Wett into the external memory of the demonstration system of Lin and Farago. The motivation for doing so would have been to make the system for flexible and customizable. By adding the second boot mode, a demonstrator has more flexibility in accessing and changing the control of the adaptive cable controller because of being able to boot from different external memories, thus allowing the controller system to perform different types of demonstrations. Further, if a store chain had a specific mode they wanted the demonstration device to run in, the factory could still produce the devices the same, and the store chain could get bootable external memories to use for their specific purpose. Other motivations for using an external boot memory are well known in the art.

Regarding claim 8, which depends from claim 7, Wett further teaches **circuitry connected to the controller to cause the controller to operate only in the second mode.** Configuration data in memory 400 is circuitry that determines which mode the device is booted

from (col. 5 lines 59-67). Thus, the configuration data can be set to cause the controller to operate only in the second mode.

Regarding claim 9, which depends from claim 7, Farago further teaches that **the external memory further comprises demonstration code that the controller executes.** Executable code is included to instruct the controller to perform formatting and sending of the data to the peripheral. This code is stored in programmable memory 1 of Farago shown in Fig. 1 along with other program code for controlling the printer demonstration as discussed in col. 2 lines 50-55.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd

KING Y. POON
PRIMARY EXAMINER